German Manufacturing Barometer

Focus topic: digitalisation

July 2024

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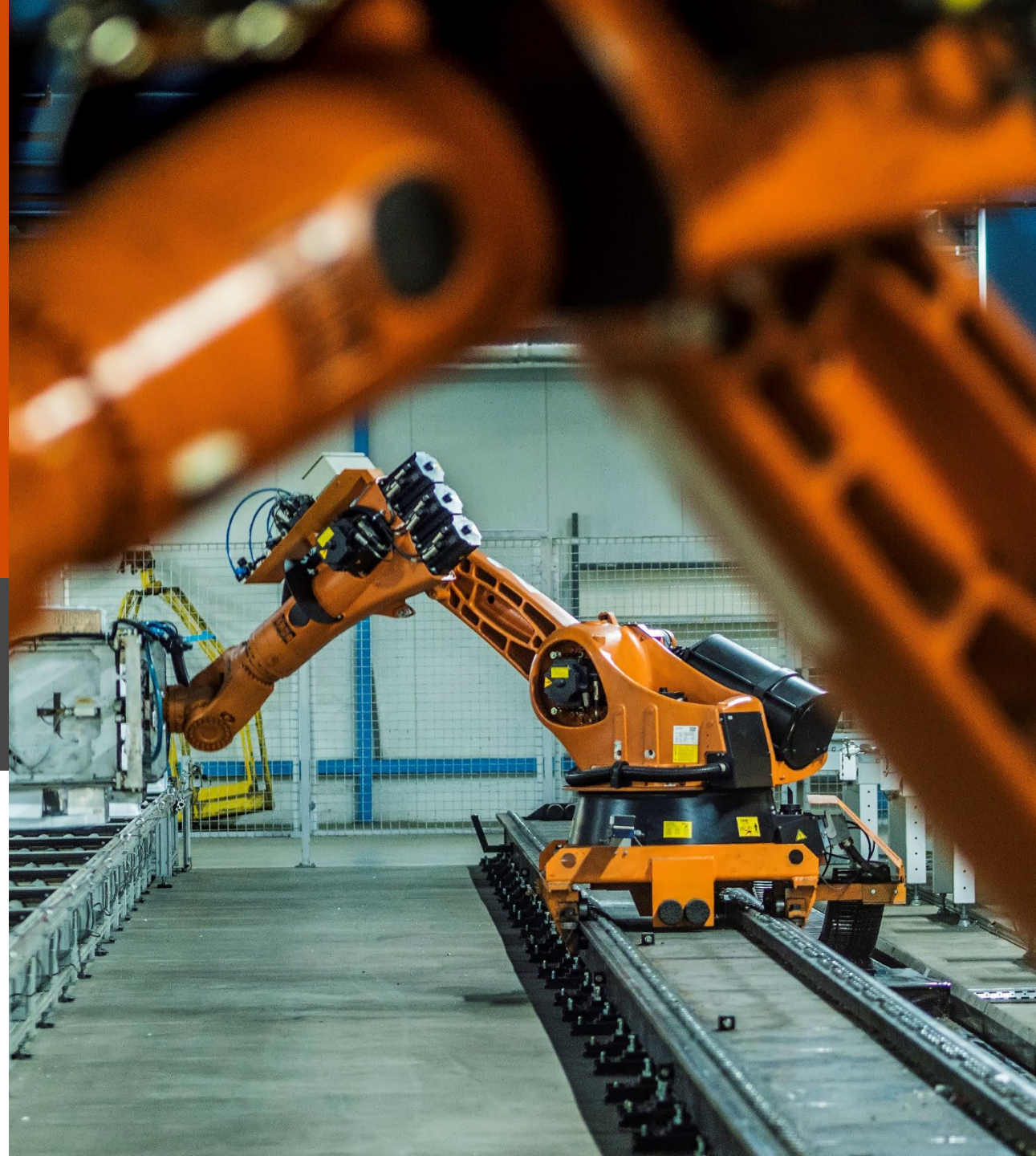

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At a glance

PwC German Manufacturing Barometer

The German mechanical and plant engineering industry faces uncertainty and a negative outlook. While optimism among decision-makers regarding the German and global economy has increased, a record number of respondents remain undecided. One fifth of decision-makers expect positive development in the German economy over the next 12 months, but 42% are undecided, the highest proportion in the last five years.

The industry continues to experience a negative growth trend, with indicators pointing to further contraction in the coming months. Decision-makers expect an average revenue decline of 3.9%, marking the fifth consecutive quarter with a negative revenue forecast. Additionally, more than a third believe that their revenue will continue to shrink in 2024. However, the momentum of inflation and price increases seems to be dissipating, as only 20% of respondents plan to raise prices in the next quarter. Nevertheless, cost pressure remains the biggest challenge for the industry; 8 out of 10 decision-makers see it as an obstacle to their own growth.

Artificial intelligence (AI) is viewed as a key future technology for efficient and environmentally friendly resource use in production. Despite this, production and assembly processes in the industry are less digital than other areas, such as procurement, marketing, sales, and research and development. Only 35% of respondents consider the level of digitalisation in production and assembly processes to be high.

Executive summary

The German mechanical and plant engineering sector is characterised by uncertainty. Nevertheless, managers in the sector are cautiously optimistic about the global economy. Sales forecasts and capacity utilisation remain depressed. Managers are also concerned about high costs and the shortage of skilled labour. It is therefore not surprising that many see new opportunities for the industry in the use of AI. However, this would also require further digitalisation of production.

37%

of the machinery and plant manufacturers surveyed are **pessimistic** about the **development of the German economy** over the next 12 months.

42%

are **undecided** about the future **development of the German economy.**

–3.9%

is the **sales growth forecast** for the **industry as a whole** in 2024.

–1.5%

is the average **sales growth expectation** for **respondents' own companies** in 2024.

85.6%

is the **average capacity utilisation** among the respondents – 32% are working at close to full capacity.

52%

of the decision-makers surveyed see **artificial intelligence as having the potential to change the industry in the long term** – last year the figure was 45%.

2 Methodology

About the study

150 companies in Germany

PwC's **German Manufacturing Barometer** is an analysis of a quarterly panel survey of managers in the German mechanical and plant engineering sector. In addition to an assessment of general economic developments, the study provides an overview of companies' expectations with regards to key performance indicators such as margins, prices and investments. This time, we also asked about the degree of digitalisation in the sector.

Methodology

Survey method

Computer-assisted telephone interviewing (CATI)

Market research

Verian Germany

Group of respondents

Managers from the mechanical engineering industry

Survey period

15 May to 11 June 2024

Sample size

n = 150

Results are rounded to whole numbers.

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Results

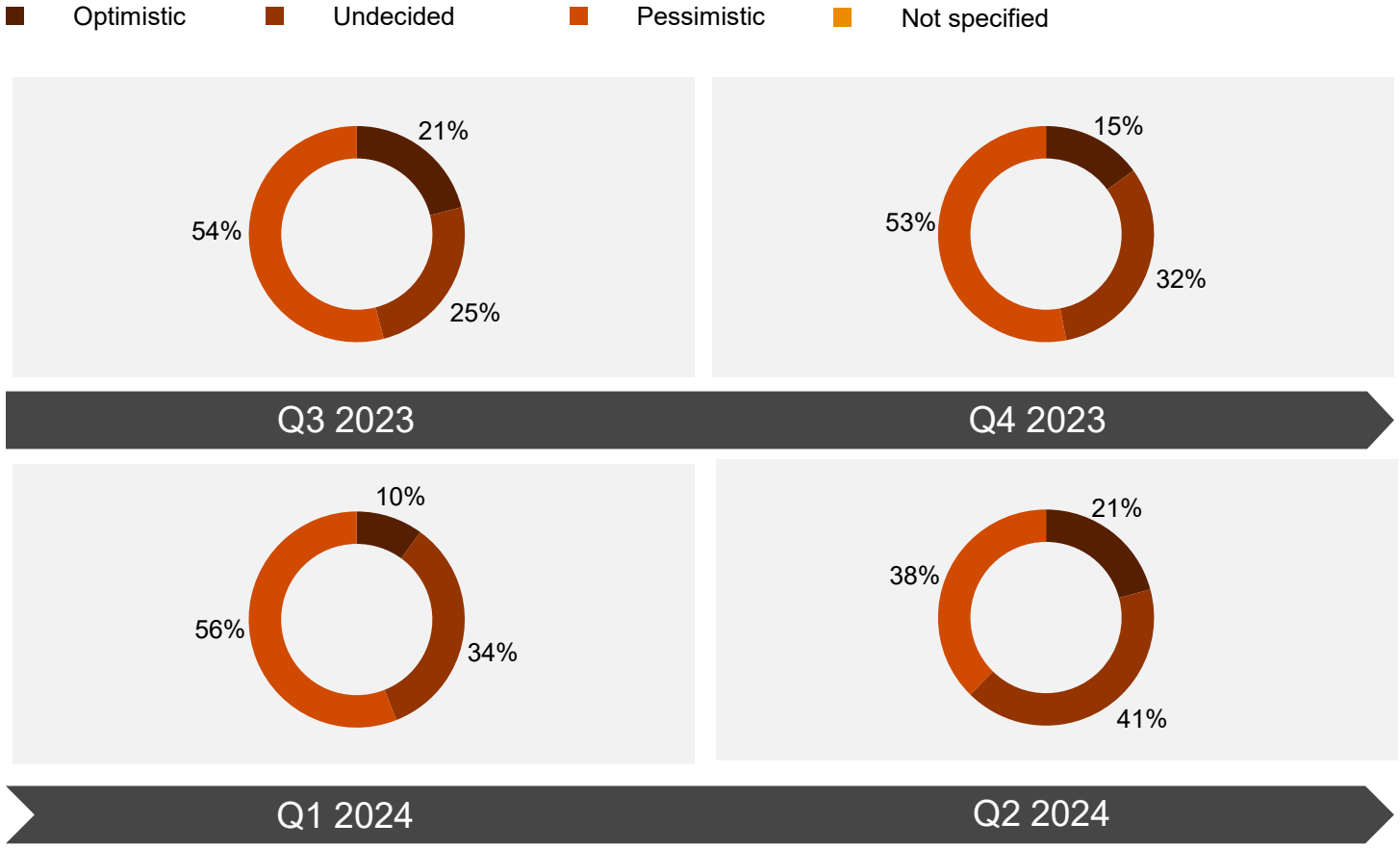
Economic expectations and sector growth

Uncertainty is spreading

The proportion of optimists, i.e. those respondents who are positive about the development of the German economy over the next 12 months, has risen by 11 percentage points since the last survey. Accordingly, one in five decision-makers anticipates an upward trend in the economy. However, the overall picture also includes the fact that 42% of the business leaders surveyed are undecided about how they expect the German economy to develop. This is the highest figure of any of our surveys in the past five years. Nevertheless, pessimism in the sector has decreased slightly: 37% of the decision-makers surveyed expect the German economy to develop negatively, compared to more than half in the previous quarter.

Economic expectations (Germany)

Looking ahead to the next 12 months, how do you rate the development of the German economy?



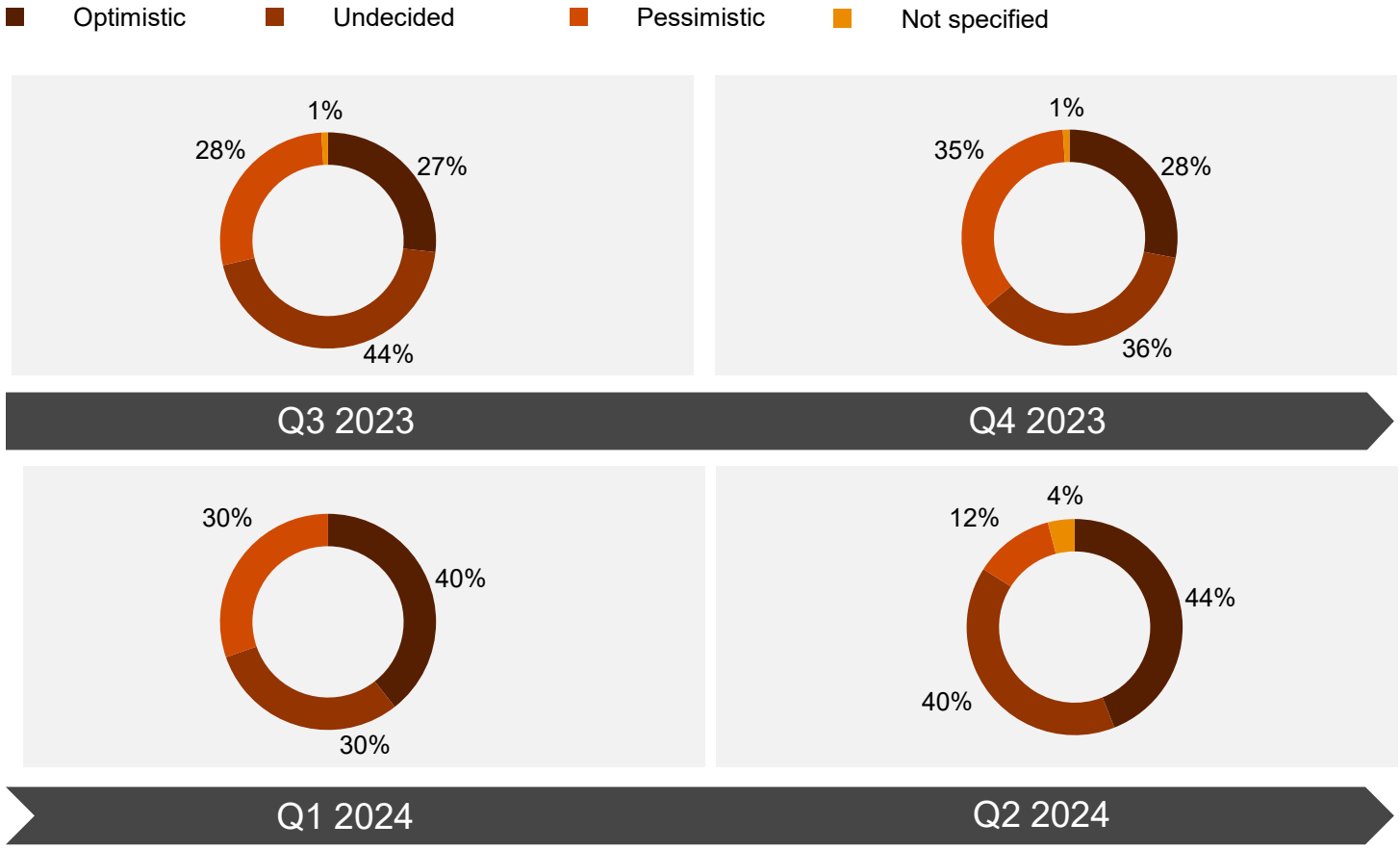
Cautiously optimistic view of the global economy

Widespread uncertainty

Halfway through the year, 44% of the decision-makers surveyed were optimistic about the development of the global economy – an increase of 5 percentage points compared to the previous quarter. The proportion of those who are pessimistic about the future development of the global economy is now only 12% – a decrease of 18 percentage points compared to the previous quarter. This may represent a reversal of the previous trend. Nevertheless, the proportion of undecided respondents is at a **record high**: 44% are uncertain about the future.

Economic expectations (world)

Looking ahead to the next 12 months, how do you rate the development of the global economy?



Sector forecast still in the red

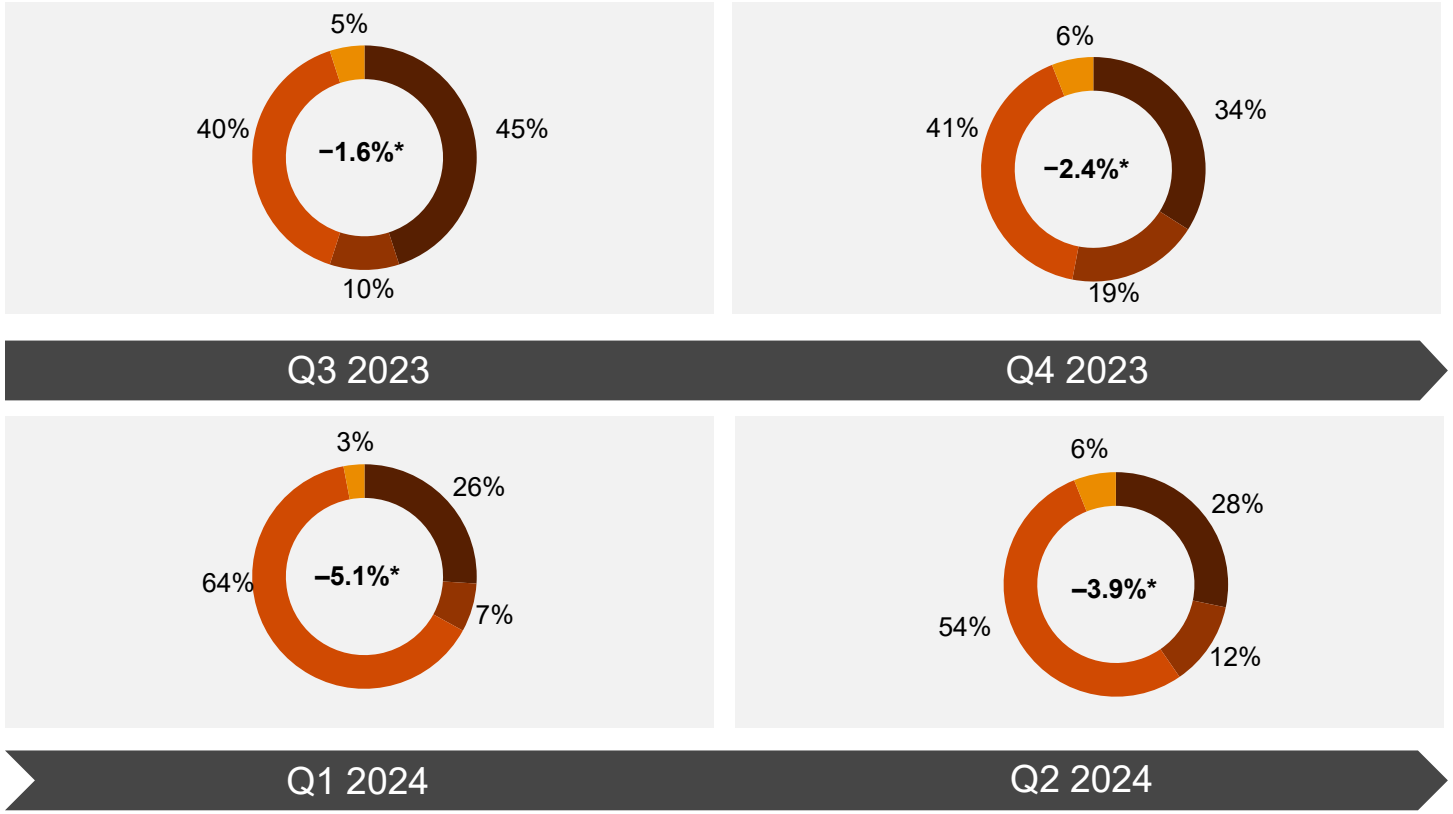
More than half expect the industry to shrink

The average expected change in turnover for the industry as a whole in 2024 has been revised slightly upwards by the decision-makers compared to the previous quarter and now stands at –3.9% (previous quarter: –5.1%). More than half of those surveyed (53%) expect a negative sales trend for the industry in total. We are witnessing the fifth consecutive quarter with a negative average value – the second-longest negative streak since the start of our barometer series. Slightly more than one in four (28%) expect the sector to grow this year – a slight increase on the previous quarter.

Sector development

How do you expect turnover to develop in your industry as a whole for 2024 compared to the previous year?

Growth | Constant | Negative | Not specified | *Average expected change in turnover



Results

Corporate development in 2024

Sales forecast decreases further

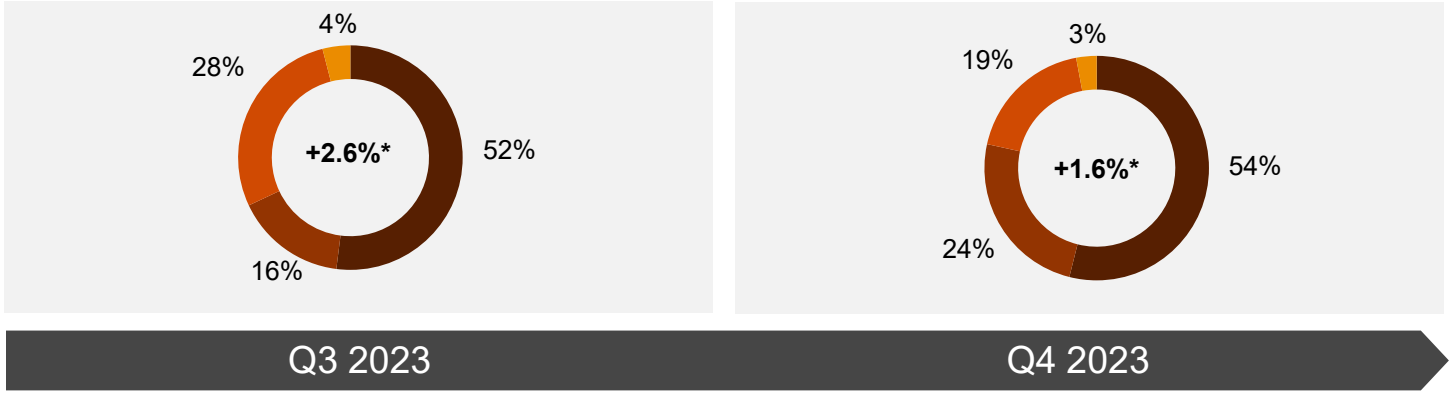
Negative outlook for respondents' own companies

The average forecast change in turnover for respondents' own businesses in 2024 remains on a downward trend at –1.5%. This value is only exceeded by the negative record in the coronavirus autumn of 2020. The growth forecast has shrunk continuously in recent quarters. In the previous year, the second-quarter forecast was still at 2.0%. Only 24% of the companies surveyed share the view that growth of at least 5% is possible in 2024. This is the lowest figure in four years.

Turnover

How do you expect your company's turnover to develop in 2024?

Positive | Constant | Negative | Not specified | *Average expected change in turnover



Results

Digitalisation

Mechanical engineering relies on smart procurement

Assembly and production least digitalised

As in previous years, the areas of production and assembly continue to have the lowest levels of digitalisation. Only 35% of respondents stated that these areas are fully digitalised. The areas of research and development, service, and quality management have seen a slight upturn, while procurement continues to be the most digitalised area. Digital solutions in procurement can lead to significant increases in efficiency, cost savings and improved transparency in the supply chain; this is the most digital area in 6 out of every 10 companies.

How would you rate the degree of digitalisation of the following functions or areas in your company?

61% (57%)

Procurement

53% (55%)

Marketing

52% (55%)

Distribution

Basis: n = 150, multiple answers allowed; values 1 + 2 on a scale from 1 'very high' to 5 'very low'

	"Yes" answers Q2 2024		Q2 2023
Research and development	51%	↖	49%
Service	49%	↖	46%
Quality management	45%	↖	44%
Storage	41%	↙	44%
Transport, logistics	37%	↙	39%
Assembly, production	35%	↙	37%

Pioneering technologies

Artificial intelligence: the engine of progress

Decision-makers in mechanical and plant engineering cite artificial intelligence (52%), robotics (42%) and 3D printing (38%) as key future technologies. The relevance of AI in the industry has increased by another 7 percentage points since the last survey. Technologies such as virtual reality and augmented reality are also continuing to gain in importance, while blockchain and drones continue to lead a niche existence despite a slight increase.

Digitalisation

In your opinion, which of the following technologies are most likely to have the potential to change your industry in the future?

52% (45%)

Artificial intelligence

42% (44%)

Robotics

38% (41%)

3D printing

Basis: n = 150, multiple answers allowed

	“Yes” answers	
	Q2 2024	Q2 2023
Big data and data analysis	29% ↙	34%
Cloud applications	24% ↙	31%
Virtual reality and augmented reality	24% ↖	15%
Internet of things	22% ↙	25%
Cybersecurity	19% ←	19%
Digital twins	15% ←	15%
Blockchain	3% ↖	2%
Drones	5% ↖	1%

Results

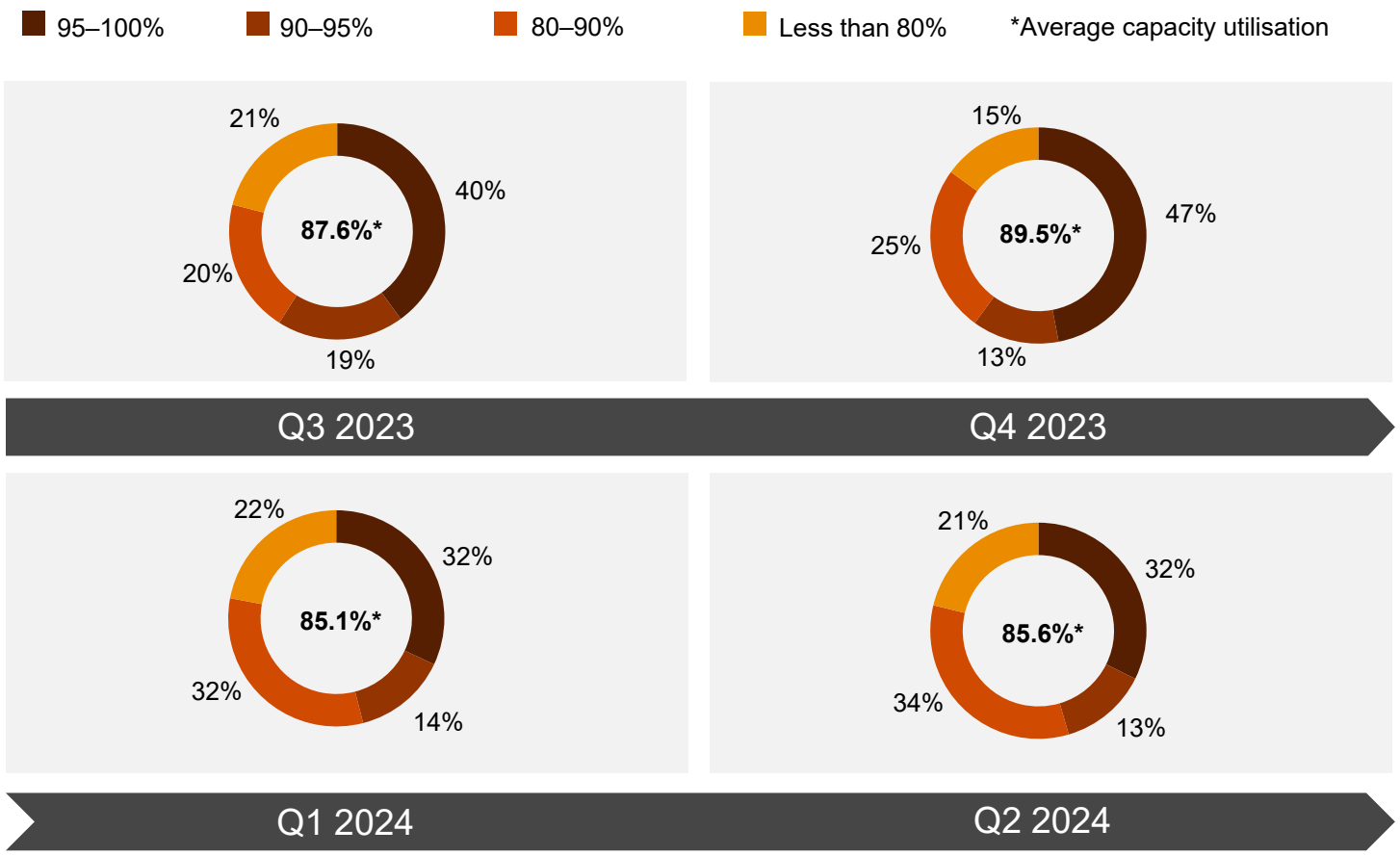
Current capacity utilisation and challenges

Capacity utilisation remains low

The average capacity utilisation of companies in the mechanical engineering sector currently stands at 85.6% – a marginal increase of 0.5 percentage points compared to the previous quarter. The level of capacity utilisation shows a constant trend: 32% of companies are currently working close to their capacity utilisation limit – a value at the same level as in the previous quarter. Capacity utilisation is below average in a long-term comparison; this is due to a combination of the economic slowdown and falling orders on the one hand, and high costs and uncertain (geo)political conditions on the other.

Utilisation

If you think about your company's capacity in general, how high would you estimate your company's current capacity utilisation to be?

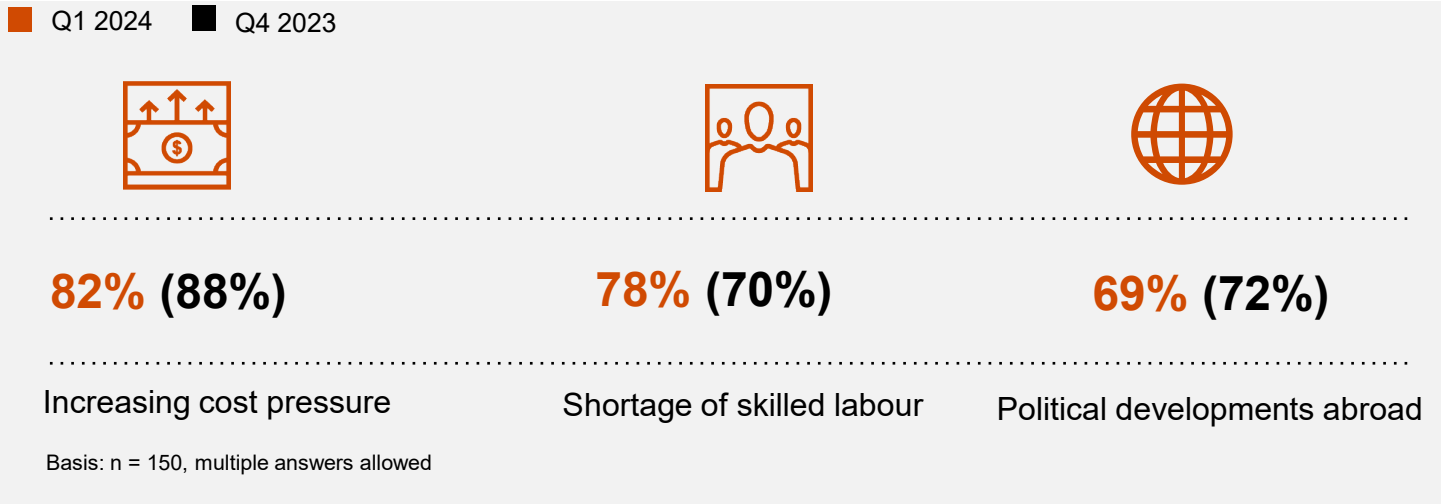


Growing deficits in qualified personnel

The three biggest challenges for the German mechanical and plant engineering sector remain unchanged halfway through the year. 82% of the decision-makers surveyed cited increasing cost pressure as an obstacle to their company's growth (–6 percentage points compared to the previous quarter). The problems caused by a lack of skilled labour are also growing: 78% cited an increase in the shortage of skilled labour as an obstacle to growth (+8 percentage points). The critical perception of regulations has also continued to increase. Since autumn 2021, the proportion of those who perceive regulations as an obstacle to growth has increased by over 30%.

Challenges

Please tell me whether or not you currently see the following points as obstacles to your company's growth.



Basis: n = 150, multiple answers allowed

"Yes" answers

	Q2 2024		Q1 2024
Difficult regulatory environment	60%	↖	59%
Weak demand	50%	↙	51%
More intense competition	49%	↖	46%
Difficult financing environment	30%	↙	34%
Climate change	22%	↖	16%

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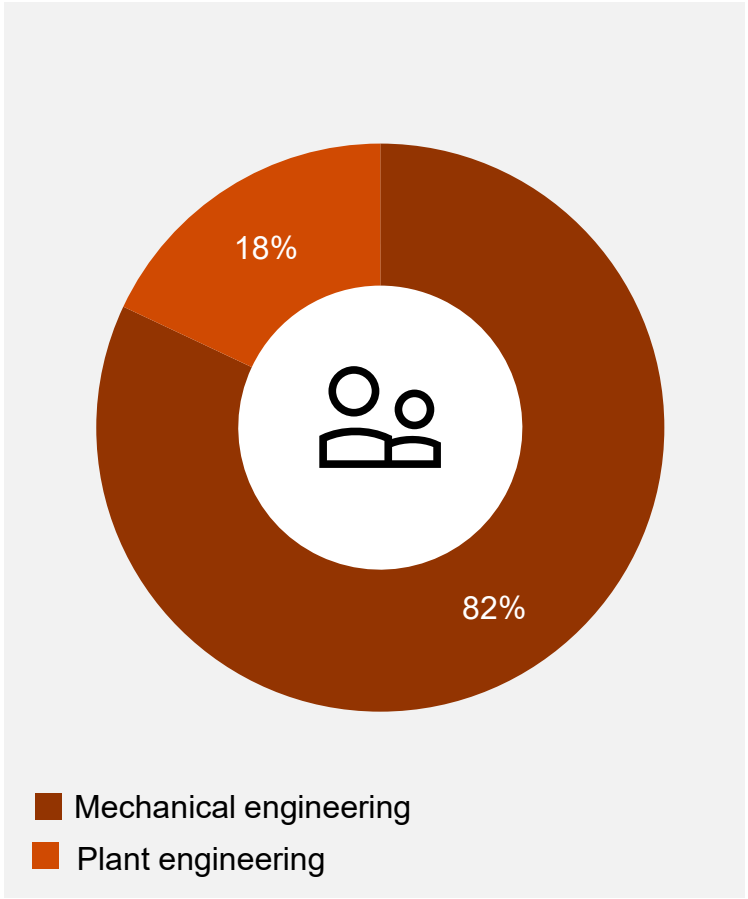
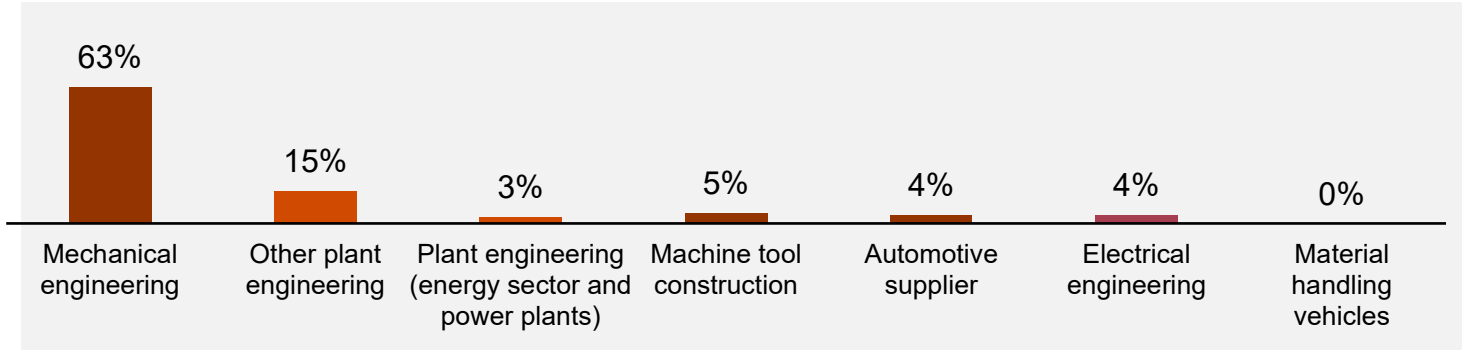
Survey statistics

Survey statistics

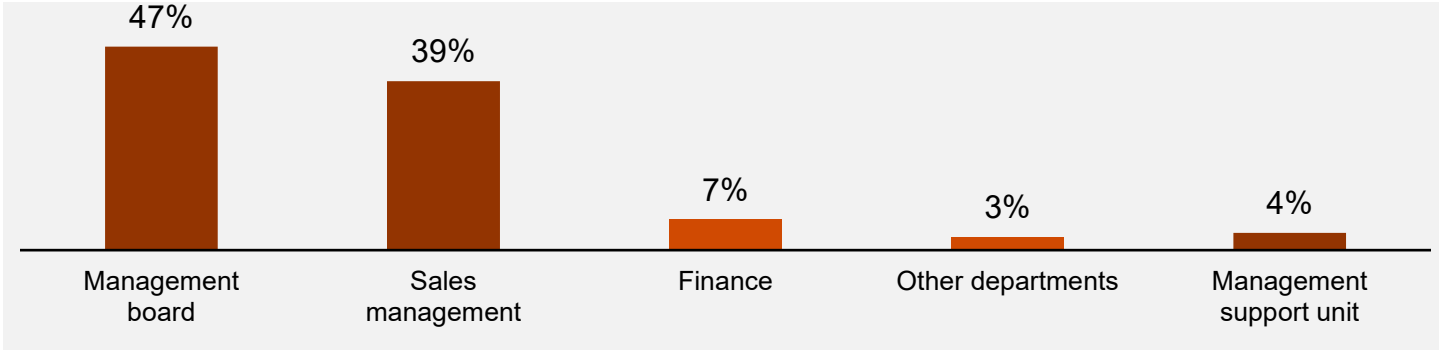
Industry affiliation



Industry affiliation in detail



Function of the interviewees



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Contact us

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Industry: industrial manufacturing

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Thank you.

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